

each missile is critical. Units often conduct missile live fires in a vacuum to ensure target hits, but this does not train gunners for the realities of the battlefield. The heavy machineguns should be used to engage targets during missile flight, and demolitions should be used to simulate enemy attempts to suppress the TOW gunner. All live mis-

sile shots should be conducted during limited visibility, either at night or with smoke and obscurants down range.

These suggestions are by no means a complete guide to commanding an antiarmor company; they represent the salient points of my 31 months commanding one of these units. Although I took command with many doubts and

regrets, I gave it up thankful for a rewarding experience and regretful only that my turn was over.

Captain Michael P. Lerario commanded Company D, 2d Battalion, 325 Infantry, 82d Airborne Division, during the Gulf War. A 1983 graduate of the United States Military Academy, he is now a graduate student at the academy on an Eisenhower Fellowship.

The Two-Round Zero

CAPTAIN CHES H. GARNER

The current procedure for zeroing an M16A2 rifle wastes time and ammunition and allows such variables as trigger squeeze, breathing, and stock weld to affect the zero. We now use a three-round shot group to minimize the effects of these variables.

We can streamline these zeroing procedures by borrowing some techniques from hunters, who use only two rounds of ammunition to zero a hunting rifle. This method works, whether zeroing iron sights or scopes, and it will also work with the M16A2 rifle.

The shooter places his mechanically zeroed weapon securely in a bench rest

and uses the adjustments on the rest to put his rifle sights directly over the center of a 25-meter zero target, or the desired point of aim (Figure 1), and fires a round at the target. Using the bench rest adjustments, he then moves his rifle sights back over the desired point of impact (Figure 2), which compensates for the weapon's recoil.

The shooting coach then goes to the 25-meter zero target and tapes an E-type silhouette (cut from the center of a zero target) directly over the round's entry hole. The firer carefully moves his sight picture directly over the taped-on target. To do this, he raises or lowers the front

sight post for elevation corrections and turns the windage knob for left or right corrections (Figure 3). The coach may help the firer by relaying to him the approximate number of elevation and windage clicks needed based upon the strike of the round on the zero target.

The firer now has his sights aligned precisely over the actual point of impact on the target. If the rifle has not slipped in the bench rest during the sight adjustments, it is zeroed. To confirm the zero, the firer simply moves his sights back over the desired point of impact—the original zero target—using the adjustments on the bench rest and fires a



Figure 1

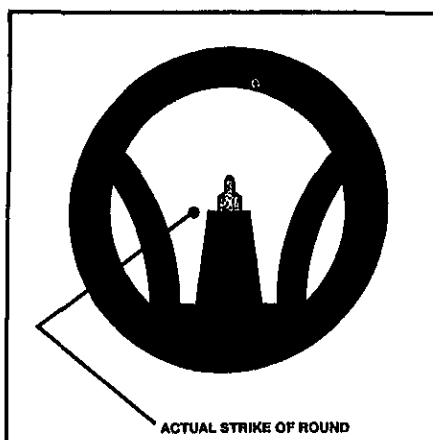


Figure 2

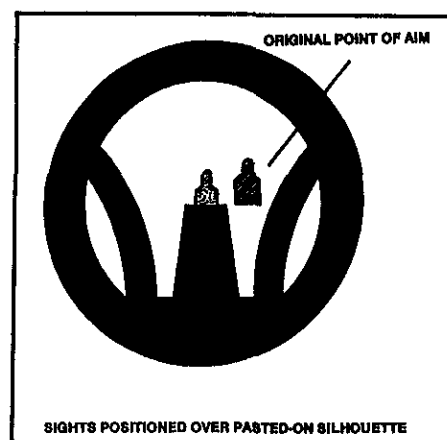


Figure 3

second round to confirm it. If the rifle is zeroed, this round will hit the desired point of impact. If it is not, the firer simply repeats the procedure from the second round's point of impact on the zero target. He then fires one round at a target, moves the rifle's sights directly over the bullet hole in the target, and finally fires a confirmation round at the original target. This simple procedure allows him to zero the rifle quickly by moving the point of aim to the point of impact.

Tank gunners use a similar process in zeroing their main guns. After bore-sighting, a gunner aims at a known-distance target's center of mass and shoots. If the round hits the target, he simply moves (or indexes) the reticle pattern of his integrated thermal sight over the hole in the target, and the main gun is zeroed.

An important factor in marksmanship that many leaders fail to recognize is eye dominance. The M16A2 is designed to be fired by a right-handed person using his right eye to aim with, or by a left-handed person using his left eye. But many right-handed people are left-eye dominant, and many left-handed people are right-eye dominant. This difference can be a problem for a shooter who is not aware of it. An effective solution is for each shooter to identify his dominant eye and fire from the shoulder that corresponds to that eye.

Before zeroing, range personnel should administer an eye-dominance test to each soldier who will be firing. This ensures that leaders identify soldiers with eye dominance problems and help them determine which eye to use in sighting.

In my company, a squad leader with an unrecognized eye-dominance problem who had barely qualified *marksman* for nine years immediately qualified *expert* once he realized he needed to fire his weapon using the other eye.

A simple eye-dominance test is as follows:

- The soldier picks out a distant object.



- Keeping both eyes open, he places the index finger of either hand over the object.

- He then closes one eye at a time and notes when the object "moves" from under his finger.

- If the object "moves" when his right eye is closed, his right eye is dominant. If the object "moves" when his left eye is closed, his left eye is dominant.

The only items of equipment a unit needs for the two-round zero are good, adjustable bench rests. Many companies make these, and a unit can order them on a local purchase basis from the larger gun and shooting accessory stores. The present zero ranges, zero targets, and target stands can be used without modification. Each zero station needs an additional E-type silhouette cut from the center of a zero target to use as a point of impact marker and a sight picture reference point.

The use of the bench rest eliminates the need to fire three rounds of ammunition to obtain a shot group before making sight adjustments. If the first round is not true, the confirmation round will alert the firer to this fact, and he can repeat the process.

This proposed zeroing method will not eliminate the need for the steady-hold techniques. The purpose of zeroing is only to provide the firer with a weapon that places rounds on target. The two-round method does this while also saving both time and ammunition.

Captain Ches H. Garner served as a rifle company commander and an assistant brigade S-3 in the 82d Airborne Division. He is now pursuing a graduate degree at the United States Military Academy in preparation for a tactical officer assignment there. He is a 1984 graduate of The Citadel.
